

LISTING OF THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1 – 140 (canceled)

141. (currently amended) A method for forming a given size armature to increase the power of an electric motor using that given size armature, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator;

molding plastic to at least partially encase the magnet wires in the plastic to hold them in place in the slots without using coil stays; and

winding the magnet wires in the slots includes winding them so that they also occupy portions of the slots that are occupied by coil stays in an armature ~~having the same size as the given size armature~~ where coil stays are used to hold the magnet wires in place in the slots and where the armature in which the coil stays are used has the same size as the given size armature.

142. (withdrawn) The method of claim 141 wherein the magnet wires include armature lead wires that extend from the slots to the commutator and molding the plastic includes molding the plastic around the armature lead wires to support them and prevent them from vibrating when the armature rotates during operation.

143, 144 (canceled)

145. (original) The method of claim 141 and further including applying pressure to the magnet wires to compress them in the slots.

146. (previously presented) The method of claim 145 wherein applying pressure to the magnet wires includes applying the pressure with the plastic while it is being molded.

147. (original) The method of claim 145 wherein applying pressure to the magnet wires includes applying the pressure by applying iso-static pressure to the magnet wires before the plastic is molded.

148. (original) The method of claim 147 wherein applying iso-static pressure includes placing the armature with the magnet wires wound in the slots in the lamination stack in a cavity of a fluid bladder and pressurizing the fluid bladder.

149. (withdrawn) The method of claim 145 wherein winding magnet wires in the slots includes winding magnet wires having a layer of heat activated adhesive thereon and activating the heat activated adhesive with heat of the plastic during the molding of the plastic.

150. (withdrawn) The method of claim 141 wherein the magnet wires include armature lead wires that extend from the slots to the commutator and molding the plastic includes injection molding the plastic around the magnet wires in the slots of the lamination stack, around the armature lead wires and around the ends of the magnet wires where they are secured to the commutator.

151. (withdrawn) The method of claim 150 wherein winding magnet wires in the slots includes winding magnet wires having a layer of heat activated adhesive thereon and activating the heat activated adhesive with heat of the plastic during the molding of the plastic.

152. (withdrawn) The method of claim 151 and further including applying pressure to the magnet wires to compress them in the slots.

153. (withdrawn) The method of claim 152 wherein applying pressure to the magnet wires includes applying the pressure with the plastic while it is being molded and retaining the magnet wires in the slots with molded plastic.

154. (withdrawn) The method of claim 152 wherein applying pressure to the magnet wires includes applying iso-static pressure to the magnet wires before the plastic is molded.

155. (withdrawn) The method of claim 154 wherein applying iso-static pressure includes placing the armature with the magnet wires wound in the slots in the lamination stack in a cavity of a fluid bladder and pressurizing the fluid bladder.

156. (withdrawn) The method of claim 141 wherein the plastic is a thermally conductive plastic.

157. (withdrawn) The method of claim 156 wherein the plastic has a base polymer and a thermally conductive additive of at least one of aluminum oxide, boron nitride, and aluminum nitride.

158 - 231 (canceled)

232. (currently amended) A method for making an electric motor with a given size armature to increase the power of the electric motor using that given size armature, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator;

molding plastic to at least partially encase the magnet wires in the plastic to hold them in place without using coil stays;

winding the magnet wires in the slots includes winding them so that they also occupy portion of the slots that are occupied by coil stays in an armature ~~having the same size as the given size armature~~ where coil stays are used to hold the magnet wires in place in the slots and where the armature in which the coils stays are used has the same size as the given size armature; and

disposing the armature in a stator.

233. (canceled)

234. (previously presented) The method of claim 232 and further including applying pressure to the magnet wires to compress them in the slots.

235. (previously presented) The method of claim 234 wherein applying pressure to the magnet wires includes applying the pressure with the plastic while it is being molded and further including retaining the magnet wires in the slots with molded plastic.

236 - 239 (canceled)

240. (currently amended) A method for making a power tool having an electric motor with a given size armature to increase the power of the electric motor using that given size armature, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator;

molding plastic to at least partially encase the magnet wires in the plastic to hold them in place in the slots without using coil stays;

winding the magnet wires in the slots includes winding them so that they also occupy portion of the slots that are occupied by coil stays in an armature ~~having the same size as the given size armature~~ where coil stays are used to hold the magnet wires in place in the slots and where the armature in which the coil stays are used has the same size as the given size armature; and

disposing the armature in a stator to form the electric motor and disposing the electric motor in the power tool.

241. (canceled)

242. (previously presented) The method of claim 240 and further including applying pressure to the magnet wires to compress them in the slots.

243. (previously presented) The method of claim 242 wherein applying pressure to the magnet wires includes applying the pressure with the plastic while it is being molded and further including retaining the magnet wires in the slots with molded plastic.

244 - 247 (canceled)

250. (canceled)